

FIGURE 1

Nucleotide Sequence of Human NNT-1 cDNA

1 ATTAAGCTT CGCCGAGCC GCGGCTCGCC CTCCACTCC GCCAGCCTCC
51 GGGAGAGGAG CCGCACCCGG CCGGCCAGC CCCAGCCCCA TGGACCTCCG
101 AGCAGGGGAC TCGTGGGGGA TGTTAGCGTG CCTGTGCACG GTGCTCTGGC
151 ACCTCCCTGC AGTGCCAGCT CTCAATCGCA CAGGGGACCC AGGGCCTGGC
201 CCCTCCATCC AGAAAACCTA TGACCTCACC CGCTACCTGG AGCACCAACT
251 CCGCAGCTTG GCTGGGACCT ATCTGAACTA CCTGGGCCCC CCTTCAACG
301 AGCCAGACTT CAACCCTCCC CGCCTGGGGG CAGAGACTCT GCCCAGGGCC
351 ACTGTTGACT TGGAGGTGTG GCGAAGCCTC AATGACAAAC TCGGCTGAC
401 CCAGAACTAC GAGGCCTACA GCCACCTTCT GTGTTACTTG CGTGGCCTCA
451 ACCGTCAGGC TGCCACTGCT GAGCTGCGCC GCAGCCTGGC CCACTTCTGC
501 ACCAGCCTCC AGGGCCTGCT GGGCAGCATT GCGGGCGTCA TGGCAGCTCT
551 GGGCTACCCA CTGCCCCAGC CGCTGCCTGG GACTGAACCC ACTTGGACTC
601 CTGGCCCTGC CCACAGTGAC TTCCTCCAGA AGATGGACGA CTTCTGGCTG
651 CTGAAGGAGC TGCAGACCTG GCTGTGGCGC TCGGCCAAGG ACTTCAACCG
701 GCTCAAGAAG AAGATGCAGC CTCCAGCAGC TGCAGTCACC CTGCACCTGG
751 GGGCTCATGG CTTCTGACTT CTGACCTTCT CCTCTTCGCT CCCCCC

FIGURE 2

Genomic sequences of the human NNT-1

```
1  aacctgcgag tgggcctggc ggatgggatt attaaagctt cgccggagcc
51  gcggtctgcc ctccactcc gccagcctcc gggagaggag ccgcacccgg
101 ccggcccagc ccagcccca TGGACCTCCG AGCAGgt--- -----
      ----- ( >1 kb ) ----- tgaaaaccca

151 aactagccct gctcttcata acatgacaag cagcgcccca tctgatacct
201 aaaccgacca agtcacagcc ctccaactca ccctctgcct gccagacct
251 caccacatcc ttgstggact caaacctcaa ccgcactaaa tcaaccaaat
301 cccaagtcta aactaatctg aaacttttaa agtaaccag tccttaaacc
351 taacctagcc caatgccaat tatacttacc ctagccaaac cctaactgcc
401 tttgccagtc caaagtgtcc actgaatcct caccttggtc ctcactgaaa
451 atcccagaaa agcatatttc ccaactgccc acatccctcc ttacagcacc
501 caaccctggc ctctggactc ctgggtatcct gggatgtcca aactctgcag
551 tgccatcagc caacaagccc gactcgtcaa atgcacctct ctcccttcct
601 gtccccaccc ttgcaggctg atggaaaggc ctcattgaag tccaactttt
651 cccacctaa caccaagaac ggggtgaacc tccacactgc caccgttccc
701 tgagagttag cactaaatct ccttcaatct aacccaccc tacacttccc
751 aactcagga atcacatcct agaataacc caaaactaag ccccataagg
801 cagcccgacc ctagtggctc aacctatac cttgcttcct atgggtgagt
851 ctgttcttgg cggcgcctc tctcctgctt cctcccttag agctgactgt
901 gctcagcctg ccagctctga catgtgctgt ctccaccct ctgactcccc
951 tcaagctgca gtgggactgg aagactggca ggaagctagg gtacaactgg
1001 aacacaggca ggtcgacctg cagtccctag gcctggcccc gtccctccat
1051 gtacacacat atacatgttg gcacacacac agtggcacac atgccaaaga
1101 ctctctcagc tgacacacag atccattctc aagtatctac tgatagacac
1151 tcatgcgtgc caagtctca tctcaaaca tacacatgcc tctctttctc
1201 tcccgctttg ccaggagtgt ttccctcct ccatccctc tgctcccat
1251 ctgggtgtcc accctcacc cccaccagc ccaaggtggg gacagacacc
1301 tgaggggctg ccagctgctt ccccggtggt gcccgggccc cgctcatgct
1351 tctcgtccat cctgcccaca gGGGACTCGT GGGGGATGTT AGCGTGCCTG
1401 TGCACGGTGC TCTGGCACCT CCCTGCAGTG CCAGCTCTCA ATCGCACAGG
1451 GGACCCAGGG CCTGGCCCCT CCATCCAGAA AACCTATGAC CTCACCCGCT
```

Figure 2 (continued)

1501 ACCTGGAGCA CCAACTCCGC AGCTTGGCTG GGACCTATgt gagtatccag
1551 cgtaggaatc tgggagttgg ggaggagtga ggagttgggg aaagacagtc
1601 ctaaccgtgg agggttcttg taaatgatgg ggtgaggagg ggctcttttg
1651 ctcccaccag tccccctgtc tgggtctatct cctgcccttc cctcttaggt
1701 ggccccccca ctcccccatc cctggcccca ggactaggca tgtgggcagg
1751 cctcgcaccc gccttggccc attgccccac tggctgccag cccagccgcc
1801 cgcctcccc tgggggcccgg ggaagtctcc tctgtttaca ccgtgttgtg
1851 gtgtctcttg cgcgggcccgg gttgggtggg gacagagggg cccacctcc
1901 catgcctgcg ttccagctcg cctctgcccc cagacctggg gccctgctgc
1951 tctggacca ggggcctccc ttccgtctgc ctctcccatc ctagctgggc
2001 ctccatagggg ggtcatgggg gaaggggact gtagggaacc caggcagtag
2051 tggcaggggg tttagggtgt ggatggagggt tatgctgtaa ggatttgggg
2101 gtggtccaga ggtgttcaga gagcccagga gagaaggaag gagggttgga
2151 ggagccgagg caccatgggg aaccggcccc ctcttcccgt gttcctcttc
2201 cacatcccag accctactct ggagccaggg aaagaaaagg gaagaagggt
2251 gcggggggagc tggctccagc cccaggatac accgaggaaa ttagtttgtc
2301 tctgtgcttg tcagcgtgtg aacctcccc tgggcccttg cctatcccag
2351 gcctctcccc ttgcttctcc cttctttccc agttatacat ctccctcatc
2401 cctttccctg ggccccagcc gctccccga gggttggaaa gggctctgcc
2451 ctcttcccta taccatgctg tcttccatag ccttctctct gtcctactca
2501 tgagactgcc tccatttctt ccttctgcaa ccctgctcct atcagctgaa
2551 ccttctcttc ggagtgttag tgagtaccg tctctccca gccctcagc
2601 tgggtggcct ggggtgtgtc gcggcaaag gggctctggg tccaatgggc
2651 cactctcatc tctctcttgt tcttgtgca gaaaacctt gcttactcc
2701 actgccctct ctagttcccg acccttttct tctctggct ttcctgcca
2751 aatttctcca aggagtgggc tacacctct gcctccact cctctccacc
2801 cactcacttc ttaacccct gcaatctggc ttccaggccc cagcaatggt
2851 tctctccaag gtcgtcagc acctccttgc caagcccgac agtgttttga
2901 aggetcatte tccttgctgt ctgttttgca gccacactgc tgagcgtgc
2951 tgccctctcg aactcctct ccttggctct tgcactctcc tgggccacct
3001 tctacctct cagctcctcc aggctcctct tctctctgt cctgccccca
3051 cagcgggcac tctcccaagg tttgccacc cagccaatca gcacgtcctt
3101 cctgagcgtc ttgtgcgtct cctcctctc ctttttctac gcctctccat
3151 tggagagctc accaccgcca ctgcttcaac tgtcacctgc atacaaatga

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted May 1, 2014. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

Figure 2 (continued)

3201 tatccttatt ggaaaaactc agggaggcca tgaacaaaga agcctagcat
3251 ggagacaggg ccagtgtcag gggacacaaa aaatagaaac tttgggagca
3301 ggtatctcct tgggtggtgag ccagcggctc tgccctcctc cttccccatc
3351 accctctcct tttcacagCT GAACTACCTG GGCCCCCTT TCAACGAGCC
3401 AGACTTCAAC CCTCCCCGCC TGGGGGCAGA GACTCTGCCC AGGGCCACTG
3451 TTGACTTGGA GGTGTGGCGA AGCCTCAATG ACAAAGTGGC GCTGACCCAG
3501 AACTACGAGG CCTACAGCCA CCTTCTGTGT TACTTGCGTG GCCTCAACCG
3551 TCAGGCTGCC ACTGCTGAGC TGCGCCGCAG CCTGGCCCAC TTCTGCACCA
3601 GCCTCCAGGG CCTGCTGGGC AGCATTGCGG GCGTCATGGC AGCTCTGGGC
3651 TACCCACTGC CCCAGCCGCT GCCTGGGACT GAACCCACTT GGACTCCTGG
3701 CCCTGCCCAC AGTGACTTCC TCCAGAAGAT GGACGACTTC TGGCTGCTGA
3751 AGGAGCTGCA GACCTGGCTG TGGCGCTCGG CCAAGGACTT CAACCGGCTC
3801 AAGAAGAAGA TGCAGCCTCC AGCAGCTGCA GTCACCCTGC ACCTGGGGGC
3851 TCATGGCTTC tgacttctga ccttctcctc ttctgctccc cttcaaacc
3901 tgctccact ttgtgagagc cagccctgta tgccaacacc tgttgagcca
3951 ggagacagaa gctgtgagcc tctggccctt tcttgagacc gctgggctg
4001 tgatgcgatc agccctgtct cctccccacc tcccaaaggt ctaccgagct
4051 ggggaggagg tacagtaggc cctgtcctgt cctgtttcta caggaagtca
4101 tgctcgaggg agtgtgaagt ggttcagggt ggtgcagagg cgctcatggc
4151 ctctgcttc ttgcctacca cttggccagt gccaccacag cccctcaggt
4201 ggcacatctg gagggcaggg gttgaggggc caccaccaca catgccttc
4251 tggggtgaag ccctttggct gcccactct ccttggatgg gtgttgctcc
4301 cttatcccca aatcactcta tacatccaat tcaggaaaca aacatggtgg
4351 caattctaca caaaaagaga tgagattaac agtgcagggg tggggtctgc
4401 attggaggtg ccctataaac cagaagagaa aatactgaaa gcacaggggc
4451 agggacagac cagaccagac ccaggagtct ccaaagcaca gagtggcaaa
4501 caaaacccga gctgagcatc aggaccttgc ctcgaattgt cttccagtat
4551 tacggtgcct cttctctgcc ccctttccca gggatatctg gggttgccag
4601 gctggggagg gcaaccatag ccacaccaca ggatttcctg aaagtttaca
4651 atgcagtagc attttggggg gtagggtggc agctcccaa ggccctgccc
4701 cccagcccca cccactcatg actctaagtg tgttgattta atatttattt
4751 atttgagat gttatttatt agatgatatt tattgcagaa tttctattct
4801 tgtattaaca aataaaatgc ttgcccaga acttagtctc tttgccagc
4851 ctcaccctc ctggtgctca tcagactctt gccaccctg gctccactc

Figure 2 (continued)

4901 cctgcttgcc tctggtggag ctgcacagag ctctgggaag aggccctctt
4951 cctccccgca ctggggcgat gggcgcacct cagacttacc cactgctgct
5001 gccaccacca accccttgat ccctcagtc tccacacag cttctgtcca
5051 cccaggttt ccctcacccc acctttgcta agtcttcctc a

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2014. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

FIGURE 3

Amino acid Sequence of Human NNT-1 cDNA

-27				1		
	MDLR	AGDSWGMLAC	LCTVLWHLPA	VPALNRTGDP	GPGPSIQKY	17
	DLTRYLEHQL	RSLAGTYLNY	LGPPFNEPDF	NPPRLGAETL	PRATVDLEW	67
	RSLNDKLRLT	QNYEAYSHLL	CYLRLNRQA	ATAELRRSLA	HFCTSLQGLL	117
	GSIAGVMAAL	GYPLPQPLPG	TEPTWTPGPA	HSDFLQKMD	FWLLKELQW	167
	LWRSKDFNR	LKKKMPPAA	AVTLHLGAHG	F*		198

FIGURE 4

Nucleotide Sequence of Murine NNT-1 cDNA

1 TATTATTAAA GCTTCGCCGG AGCCGCGGCT CGCCCTCCCA CTCCGCCAGC
51 CTCTGGGAGA GGAGCCGCGC CCGGCCGGCC CGGCCCCCAG CCCCATGGAC
101 CTCCGAGCAG GGGACTCGTG GGGGATGTTA GCTTGCCTAT GCACGGTGCT
151 GTGGCACCTC CCTGCACTGC CAGCTCTTAA TCGCACAGGA GATCCAGGCC
201 CTGGCCCCTC CATCCAGAAA ACCTATGACC TCACCCGCTA CCTGGAGCAT
251 CAACTCCGCA GCTTAGCTGG GACCTACCTG AACTACCTGG GGCCCCCTTT
301 CAACGAGCCT GACTTCAATC CTCCTCGACT GGGGGCAGAA ACTCTGCCCA
351 GGGCCACGGT CAACTTGGAA GTGTGGCGAA GCCTCAATGA CAGGCTGCGG
401 CTGACCCAGA ACTATGAGGC GTACAGTCAC CTCCTGTGTT ACTTGCGTGG
451 CCTCAACCGT CAGGCTGCCA CAGCTGAACT CCGACGTAGC CTGGCCCCACT
501 TCTGTACCAG CCTCCAGGGC CTGCTGGGCA GCATTGCAGG TGTCATGGCG
551 ACGCTTGGCT ACCCACTGCC CCAGCCTCTG CCAGGGACTG AGCCAGCCTG
601 GGCCCCCTGGC CCTGCCCACA GTGACTTCCT CCAGAAGATG GATGACTTCT
651 GGCTGCTGAA GGAGCTGCAG ACCTGGCTAT GGCGTTCAGC CAAGGACTTC
701 AACCGGCTTA AGAAGAAGAT GCAGCCTCCA GCAGCTTCAG TCACCCTGCA
751 CTTGGAGGCA CATGGTTTCT GACCTCTGAC CCTTAACCCC CACACCTCCA
801 GGCCCACTCA GCTGTGCTT

-27	MDLRAGDSWG	MLACLCTVLW	HLPAVPALNR	TGDPGPGPSI	QKTYDLTRYL	23
	EHQLRSLAGT	YLNLYGPPFN	EPDFNPRLG	AETLPRATVN	LEVWRSLNDR	73
	LRLTQNYEAY	SHLLCYLRGL	NRQAATAELR	RSLAHFCTSL	QGLLGSIAGV	123
	MATLGYPLPQ	PLPGTEPAWA	PGPAHSDFLQ	KMDDFWLLKE	LQTLWLWSAK	173
	DFNRLKKKMQ	PPAASVTLHL	EAHGF*			198

FIGURE 6

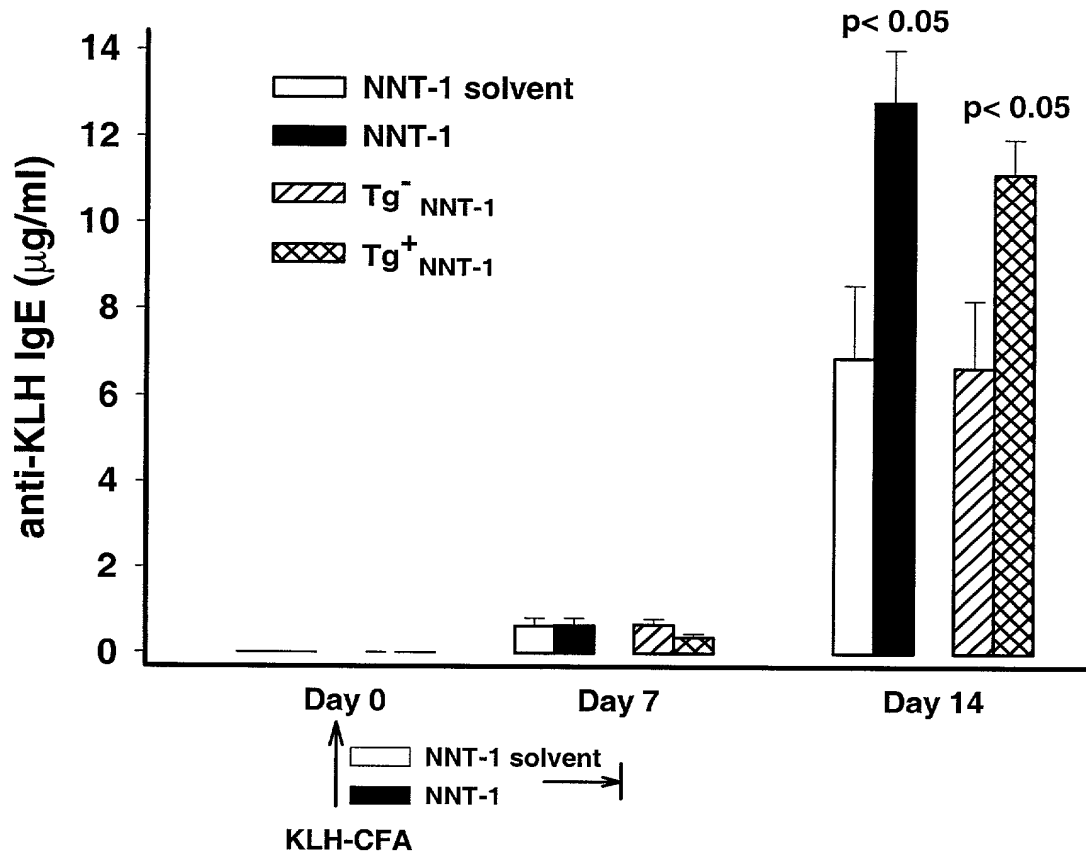


FIGURE 7

